

**Amendments to the Drawings:**

The attached replacement and annotated sheet(s) of drawings includes changes to FIGS. 1 and 2 as follows.

FIG. 1 has been amended to include the label --PRIOR ART--.

FIG. 2 has been amended to include the label --PRIOR ART--.

Attachment: Replacement Sheet  
Annotated Sheet Showing Changes

**REMARKS**

The Office Action mailed February 1, 2007 has been carefully considered.

Reconsideration in view of the following remarks is respectfully requested.

Claims 1-6 are currently pending. No claims are allowed.

In the specification, paragraphs 16, 19-21, 23, 26-29, 33, and 38 have been amended to correct minor editorial problems. No new matter has been added.

Claims 1-6 have been amended to further particularly point out and distinctly claim subject matter regarded as the invention. Support for these changes may be found in the specification, ¶¶ 9-45, and FIGS. 3A-4B.

**Objections to the Specification**

The disclosure of the Specification stands objected to for various informalities.<sup>1</sup> With this Amendment, paragraphs 14, 16, 19-20, 23, 26, 28-29, and 38 of the Specification have been amended to correct the informalities. No new matter has been added. Accordingly, the Applicants respectfully request the objection to the disclosure of the Specification be withdrawn.

**Objections to the Drawings**

The drawings stand objected to for various informalities.<sup>2</sup> With this Amendment, paragraphs FIGS. 1 and 2 have been amended to be labeled “PRIOR ART.”

The Examiner states:

With respect to one or both of drawing figures 3A & 313, note that parameters (a, 2a, 3a, 4a) as described in paragraph [0033] need to be labeled.<sup>3</sup>

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<sup>1</sup> Office Action mailed February 1, 2007, pp. 2-3.

<sup>2</sup> Office Action at p. 3.

<sup>3</sup> Office Action at p. 3.

The Applicants respectfully disagree. The Applicants respectfully submit that parameters “a,” “2a,” “3a,” and “4a” are introduced in the Specification to clearly express the mathematical expressions of L(AB), L(BC), and L(CD).<sup>4</sup> As this feature clearly appears in present FIG. 3A, modification of FIG. 3A should not be required.

No new matter has been added. Accordingly, the Applicants respectfully request the objection to the Figures be withdrawn.

Objection to the Abstract

The Abstract of the disclosure stands objected to for various informalities.<sup>5</sup> With this Amendment, the Abstract has been amended to correct the informalities. No new matter has been added. Accordingly, the Applicants respectfully request the objection to the Abstract be withdrawn.

With this Amendment it is respectfully submitted the claims satisfy the statutory requirements.

The 35 U.S.C. § 112, Second Paragraph Rejection

Claims 1-6 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter applicant regards as the invention.<sup>6</sup> With this Amendment, Claims 1-6 have been amended to address the 35 U.S.C. § 112 issues raised by the Examiner. Accordingly, the Applicants respectfully request the 35 U.S.C. § 112 rejection be withdrawn.

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<sup>4</sup> See Specification at ¶¶ 32-35.

<sup>5</sup> Office Action at p. 3.

<sup>6</sup> Office Action at pp. 4-5.

The 35 U.S.C. § 102 Rejection

Claims 1, 4 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Woods.<sup>7</sup> <sup>8</sup>

Claim 1

Claim 1 as presently amended recites:

A microwave tube for generation of an electromagnetic wave with frequency F, the microwave tube comprising:  
mechanical means for varying the frequency F wherein said mechanical means are composed of:  
a set of rings defining a periodic structure inside the tube; and  
mechanical means for displacing said rings with respect to each other while maintaining a periodicity for the periodic structure during displacement of the rings.

According to the M.P.E.P., a claim is anticipated under 35 U.S.C. § 102(a), (b) and (e) only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.<sup>9</sup>

Woods is directed to a double-cavity velocity-modulated tube<sup>10</sup> made of two cavities located *outside* the tube. The two cavities in Woods are separated by a distance which remains constant during the tuning, while it is the volume of the cavities which varies to tune the frequency of the tube (displacement of the flanges 46, 48).

The microwave tube of the invention as presently claimed is a “microwave tube for generation of an electromagnetic wave with frequency F, the microwave tube comprising: mechanical means for varying the frequency F wherein said mechanical means are composed of:

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<sup>7</sup> U.S. Patent No. 2,658,893 to Woods.

<sup>8</sup> Office Action at p. 5.

<sup>9</sup> Manual of Patent Examining Procedure (MPEP) § 2131. See also *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

*a set of rings defining a periodic structure inside the tube; and mechanical means for displacing said rings with respect to each other while maintaining a periodicity for the periodic structure during displacement of the rings."*

The moveable flanges 46, 48 are the means to tune the frequency of the device disclosed by Woods. The moveable rings A, B, C, D are the means to tune the frequency of the tube of the invention as presently claimed. The moveable rings of the invention as presently claimed constitute a periodic structure inside the tube. Whereas the moveable flanges of Wood clearly do not constitute a periodic structure located inside the tube disclosed by Wood. For these reasons, the claims as presently amended are novel in view of the cited art of record. The Applicants therefore request the 35 U.S.C. § 102(b) rejection of Claim 1 be withdrawn.

#### Dependent Claims 2-6

Claims 2-6 depend from Claim 1. Claim 1 being allowable, Claims 2-6 must also be allowable for at least the same reasons.

In view of the foregoing, it is respectfully asserted that the claims are now in condition for allowance.

#### Conclusion

It is believed that this Amendment places the above-identified patent application into condition for allowance. Early favorable consideration of this Amendment is earnestly solicited.

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<sup>10</sup> Woods at col. 1 ll. 10-11.

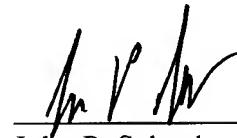
If, in the opinion of the Examiner, an interview would expedite the prosecution of this application, the Examiner is invited to call the undersigned attorney at the number indicated below.

The Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Please charge any additional required fee or credit any overpayment not otherwise paid or credited to our deposit account No. 50-1698.

Respectfully submitted,

THELEN REID BROWN  
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Reg. No. 42,125

Dated: June 1, 2007

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(ANNOTATED SHEET)

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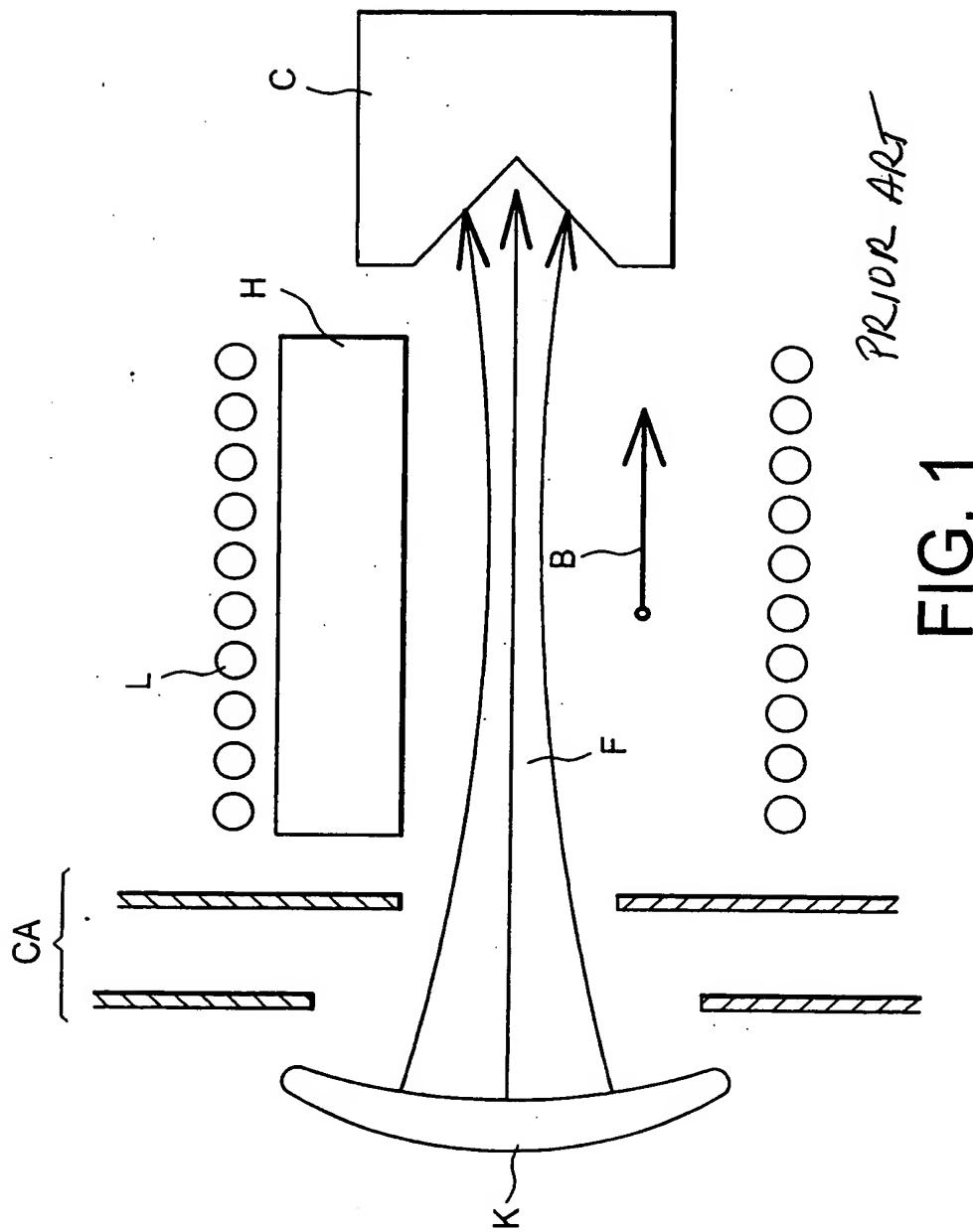
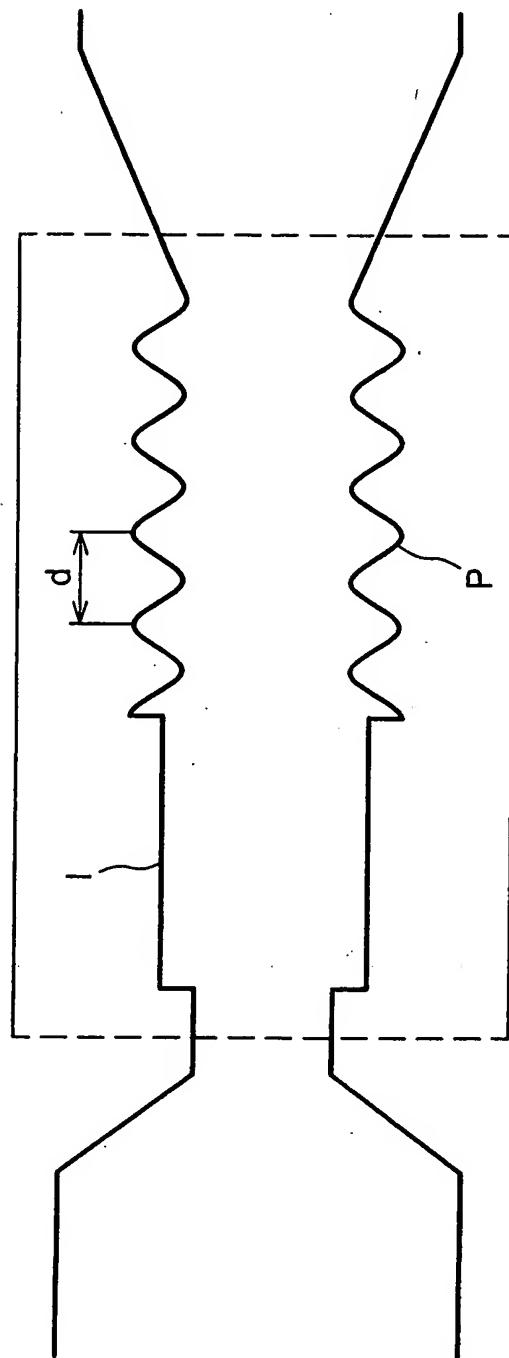


FIG. 1

(ANNOTATED SHEET)

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PRIOR ART

FIG. 2